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TO: Ralph J Gitomer **Location: rem/3D65/3C18** **Art Unit: 1655** **Friday, May 12, 2006** **Case Serial Number: 10/764455**	**From: Mary Jane Ruhl** **Location: Biotech-Chem Library** **Remsen 1-A-62** **Phone: 571-272-2524** **maryjane.ruhl@uspto.gov**

Search Notes

Examiner Gitomer,

Here are the results for your recent search request.

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Sincerely,

Mary Jane Ruhl
Technical Information Specialist
STIC
Remsen 1-A-62
Ext. 22524

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=> d his ful

     (FILE 'HOME' ENTERED AT 12:05:46 ON 12 MAY 2006)

     FILE 'HCAPLUS' ENTERED AT 12:06:26 ON 12 MAY 2006
                E EBINUMA HIROYUKI/AU
L1           19 SEA ABB=ON  "EBINUMA HIROYUKI"/AU
                E YUKI KUMIKO/AU
L2            5 SEA ABB=ON  "YUKI KUMIKO"/AU
L3            2 SEA ABB=ON  L1 AND L2
L4              ANALYZE L3 2-2 CT :       8 TERMS

     FILE 'REGISTRY' ENTERED AT 12:20:54 ON 12 MAY 2006
L5            0 SEA ABB=ON  TETRAZOLIUM SALTS/CN
                E TETRAZOLIUM/CN
L6            1 SEA ABB=ON  ALBUMINS/CN

     FILE 'HCAPLUS' ENTERED AT 12:22:18 ON 12 MAY 2006
L7       173033 SEA ABB=ON  (L6 OR ?ALBUMIN?)
L8          739 SEA ABB=ON  L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD OR NADP)
L9          378 SEA ABB=ON  L8 AND ?ENZYME?
L10           6 SEA ABB=ON  L9 AND ?DEHYDROGENATION?
L11         282 SEA ABB=ON  L9 AND ?HYDROGEN?
L12         282 SEA ABB=ON  L10 OR L11
L13           3 SEA ABB=ON  L12 AND ?COLOR?(W)(?FORM? OR ?DEVELOP?)
L14         171 SEA ABB=ON  L12 AND (?HUMAN? OR MAN OR ?BOVINE? OR COW?)
L15           2 SEA ABB=ON  L14 AND ?TETRAZOLIUM?(W)?SALT?
L16           9 SEA ABB=ON  L10 OR L13 OR L15
L17           9 SEA ABB=ON  L16 AND (PRD<20040127 OR PD<20040127)

     FILE 'MEDLINE, BIOSIS, EMBASE, JAPIO, JICST-EPLUS' ENTERED AT 12:25:55 ON
     12 MAY 2006
L18          12 SEA ABB=ON  L16
L19           6 DUP REMOV L18 (6 DUPLICATES REMOVED)

     FILE 'USPATFULL' ENTERED AT 12:33:38 ON 12 MAY 2006
L20         633 SEA ABB=ON  L16 AND (PRD<20040127 OR PD<20040127)
L21         558 SEA ABB=ON  L20 AND (NAD OR NADP)
L22         100 SEA ABB=ON  L21 AND ?DEHYDROGENAT?
L23          15 SEA ABB=ON  L22 AND ?COLOR?(W)(?FORM? OR ?DEVELOP?)

     FILE HOME

     FILE HCAPLUS

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     FILE COVERS 1907 - 12 May 2006  VOL 144 ISS 21
     FILE LAST UPDATED: 11 May 2006  (20060511/ED)

     New CAS Information Use Policies, enter HELP USAGETERMS for details.
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9 citations from CA Plus

6 citations

15 citations USPatfull

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 11 MAY 2006 HIGHEST RN 883943-03-1
DICTIONARY FILE UPDATES: 11 MAY 2006 HIGHEST RN 883943-03-1

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

FILE MEDLINE
FILE LAST UPDATED: 11 MAY 2006 (20060511/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 10 May 2006 (20060510/ED)

FILE EMBASE
FILE COVERS 1974 TO 12 May 2006 (20060512/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE JAPIO
FILE LAST UPDATED: 3 APR 2006 <20060403/UP>
FILE COVERS APRIL 1973 TO DECEMBER 22, 2005

>>> GRAPHIC IMAGES AVAILABLE <<<

>>> NEW IPC8 DATA AND FUNCTIONALITY NOT YET AVAILABLE IN THIS FILE. USE IPC7 FORMAT FOR SEARCHING THE IPC. WATCH THIS SPACE FOR FURTHER DEVELOPMENTS AND SEE OUR NEWS SECTION FOR FURTHER INFORMATION ABOUT THE IPC REFORM <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 1 MAY 2006 (20060501/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 11 May 2006 (20060511/PD)
FILE LAST UPDATED: 11 May 2006 (20060511/ED)
HIGHEST GRANTED PATENT NUMBER: US7043760
HIGHEST APPLICATION PUBLICATION NUMBER: US2006101551
CA INDEXING IS CURRENT THROUGH 11 May 2006 (20060511/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 11 May 2006 (20060511/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006

=> d ibib abs ind l3 2-2

L3 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:159722 HCAPLUS
DOCUMENT NUMBER: 140:195862
TITLE: Method and reagent for quantitating specific component in biological sample by dehydrogenase
INVENTOR(S): Ebinuma, Hiroyuki; Yuki, Kumiko
PATENT ASSIGNEE(S): Daiichi Pure Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004061263	A2	20040226	JP 2002-219222	20020729
PRIORITY APPLN. INFO.:			JP 2002-219222	20020729

AB A method and a reagent are provided for accurately quantitating an objective specific component in a biol. sample containing Hb by effectively avoiding the influence by Hb upon reacting in the presence of an electron acceptor an enzyme possessing the oxidation ability by dehydrogenation to the specific component or a substance derived from the specific component with the biol. sample containing Hb and measuring the reduced form of the electron acceptor generated (e.g., NADH, NADPH). The reagent for this method contains albumin, preferably, albumin derived from human or bovine.

IC ICM G01N033-52
ICS C12Q001-32; G01N021-78; G01N033-66
CC 9-2 (Biochemical Methods)
ST enzymic analysis dehydrogenase Hb albumin
IT Blood analysis
Color formers
Electron acceptors
Human
UV and visible spectroscopy
(method and reagent for quantitating specific component in biol. sample by dehydrogenase)
IT Hemoglobins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(method and reagent for quantitating specific component in biol. sample by dehydrogenase)
IT Albumins, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(serum, human, bovine; method and reagent for quantitating specific component in biol. sample by dehydrogenase)
IT Onium compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(tetrazolium, salts; method and reagent for quantitating specific component in biol. sample by dehydrogenase)
IT 107269-57-8, Aldopyranose dehydrogenase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(aldohexose dehydrogenase; method and reagent for quantitating specific component in biol. sample by dehydrogenase)
IT 3458-28-4, D-Mannose
RL: ANT (Analyte); ANST (Analytical study)
(method and reagent for quantitating specific component in biol. sample by dehydrogenase)
IT 53-57-6, NADPH 58-68-4, NADH

RL: ANT (Analyte); CPS (Chemical process); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(method and reagent for quantitating specific component in biol. sample by dehydrogenase)

IT 9035-82-9, Dehydrogenase 37340-89-9, Diaphorase 150849-52-8, WST-1
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method and reagent for quantitating specific component in biol. sample by dehydrogenase)

=> analyze l3 2-2 ct
L4 ANALYZE L3 2-2 CT : 8 TERMS

=> d
L4 ANALYZE L3 2-2 CT : 8 TERMS

TERM #	# OCC	# DOC	% DOC	CT
1	1	1	100.00	ALBUMINS, ANALYSIS
2	1	1	100.00	BLOOD ANALYSIS
3	1	1	100.00	COLOR FORMERS
4	1	1	100.00	ELECTRON ACCEPTORS
5	1	1	100.00	HEMOGLOBINS
6	1	1	100.00	HUMAN
7	1	1	100.00	ONIUM COMPOUNDS
8	1	1	100.00	UV AND VISIBLE SPECTROSCOPY

********* END OF L4 ***

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=> d que stat l17
L6             1 SEA FILE=REGISTRY ABB=ON  ALBUMINS/CN
L7        173033 SEA FILE=HCAPLUS ABB=ON  (L6 OR ?ALBUMIN?)
L8           739 SEA FILE=HCAPLUS ABB=ON  L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD
                 OR NADP)
L9           378 SEA FILE=HCAPLUS ABB=ON  L8 AND ?ENZYME?
L10            6 SEA FILE=HCAPLUS ABB=ON  L9 AND ?DEHYDROGENATION?
L11          282 SEA FILE=HCAPLUS ABB=ON  L9 AND ?HYDROGEN?
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                 )
L14          171 SEA FILE=HCAPLUS ABB=ON  L12 AND (?HUMAN? OR MAN OR ?BOVINE?
                 OR COW?)
L15            2 SEA FILE=HCAPLUS ABB=ON  L14 AND ?TETRAZOLIUM?(W)?SALT?
L16            9 SEA FILE=HCAPLUS ABB=ON  L10 OR L13 OR L15
L17            9 SEA FILE=HCAPLUS ABB=ON  L16 AND (PRD<20040127 OR PD<20040127)

=> d ibib abs l17 1-9

L17  ANSWER 1 OF 9  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2004:159722  HCAPLUS
DOCUMENT NUMBER:          140:195862
TITLE:                    Method and reagent for quantitating specific component
                          in biological sample by dehydrogenase
INVENTOR(S):              Ebinuma, Hiroyuki; Yuki, Kumiko
PATENT ASSIGNEE(S):       Daiichi Pure Chemical Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 9 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     JP 2004061263         A2    20040226    JP 2002-219222          20020729 <--
PRIORITY APPLN. INFO.:                       JP 2002-219222          20020729 <--
AB   A method and a reagent are provided for accurately quantitating an
     objective specific component in a biol. sample containing Hb by effectively
     avoiding the influence by Hb upon reacting in the presence of an
     electron acceptor an enzyme possessing the
     oxidation ability by dehydrogenation to the specific component or a
     substance derived from the specific component with the biol. sample containing
     Hb and measuring the reduced form of the electron
     acceptor generated (e.g., NADH, NADPH). The reagent for this
     method contains albumin, preferably, albumin derived
     from human or bovine.

L17  ANSWER 2 OF 9  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         1995:732735  HCAPLUS
DOCUMENT NUMBER:          123:163790
TITLE:                    Short-chain 3-hydroxy-2-methylacyl-CoA dehydrogenase
                          from rat liver: purification and characterization of a
                          novel enzyme of isoleucine metabolism
AUTHOR(S):                Luo, Ming Jiang; Mao, Li-Feng; Schulz, Horst
CORPORATE SOURCE:         Dep. Chem., City Coll. City Univ. New York, New York,
                          NY, 10031, USA
SOURCE:                   Archives of Biochemistry and Biophysics (1995
                          ), 321(1), 214-20
                          CODEN: ABBIA4; ISSN: 0003-9861
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PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Short-chain L-3-hydroxy-2-methylacyl-CoA dehydrogenase (SC-HMAD), a soluble mitochondrial enzyme, was purified 6000-fold from rat liver in 6% yield by a six-step purification procedure. The purified enzyme was homogeneous as judged by gel electrophoresis in the presence of SDS. The mol. mass of this protein was estimated to be 28 kDa under denaturing conditions. Under nondenaturing conditions, the enzyme behaved on Sephacryl S-200 like serum albumin with a mol. mass of 66 kDa. Thus, SC-HMAD seems to be a dimer composed of two, most likely identical 28-kDa subunits. Immunoblotting with antibodies to pig heart L-3-hydroxyacyl-CoA dehydrogenase (HAD) (EC 1.1.1.35) revealed that SC-HMAD and HAD are immunol. unrelated proteins. SC-HMAD, but not HAD, catalyzes the NAD+-dependent dehydrogenation of L-3-hydroxy-2-methybutyryl-CoA, a metabolite of isoleucine, to 2-methylacetoacetyl-CoA. Relative activities with 3-hydroxy-2-methylacyl-CoA thioesters having acyl chains with 4, 5, 10, and 16 carbon atoms are 88, 100, 16, and 0%, resp. Unbranched 3-hydroxyacyl-CoA thioesters are also substrates of SC-HMAD, although poorer ones as evidenced by apparent Km values of 5 and 19 μM for L-3-hydroxy-2-methylbutyryl-CoA and L-3-hydroxybutyryl-CoA, resp. Maximal velocities observed with these two substrates were similar. It is concluded that SC-HMAD catalyzes the second dehydrogenation step during the β-oxidation of the isoleucine metabolite 2-methylbutyryl-CoA. This enzyme may also be involved in the β-oxidation of natural and xenobiotic branched chain carboxylic acids.

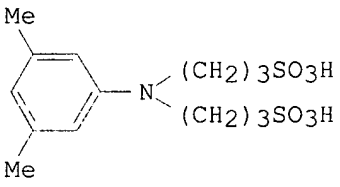
L17 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:404853 HCAPLUS
DOCUMENT NUMBER: 115:4853
TITLE: Coenzyme F420 dependent N5,N10-methylenetetrahydromethanopterin dehydrogenase in methanol grown Methanosarcina barkeri
AUTHOR(S): Enssle, M.; Zirngibl, C.; Linder, D.; Thauer, R. K.
CORPORATE SOURCE: Fachbereich Biol., Philipps-Univ., Marburg, W-3550, Germany
SOURCE: Archives of Microbiology (1991), 155(5), 483-90
CODEN: AMICCW; ISSN: 0302-8933
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The dehydrogenation of N5,N10-methylenetetrahydromethanopterin (I) to N5,N10-methenyltetrahydromethanopterin is an intermediate step in the oxidation of MeOH to CO2 in M. barkeri. The reaction is catalyzed by I dehydrogenase, which is specific for coenzyme F420 as electron acceptor; neither NAD, NADP , nor viologen dyes could substitute for the 5-deazaflavin. The dehydrogenase was anaerobically purified almost 90-fold to apparent homogeneity in a 32% yield by anion exchange chromatog. on DEAE Sepharose and Mono Q HR and by affinity chromatog. on Blue Sepharose. SDS-PAGE revealed only 1 protein band with an apparent mass of 31 kDa. The apparent mol. mass of the native enzyme determined by polyacrylamide gradient gel electrophoresis was 240 kDa. The UV/visible spectrum of the purified enzyme was almost identical to that of albumin , suggesting the absence of a chromophoric prosthetic group. Reciprocal plots of the enzyme activity vs. the substrate concns. were linear: the apparent Km for I and for coenzyme F420 were 6 μM and 25 μM, resp. Vmax was 4000 μmol/min-mg protein (kcat = 2066/s) at pH 6 (the pH optimum) and 37°. The Arrhenius activation energy

was 40 kJ/mol. The N-terminal amino acid sequence was 50% identical with that of the F420-dependent I dehydrogenase isolated from H2/CO2 grown Methanobacterium thermoautotrophicum.

L17 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:194925 HCAPLUS
DOCUMENT NUMBER: 112:194925
TITLE: Enzymic method and kit for the determination of NAD(P)H and serum analytes, and preparation of chromogens for the method
INVENTOR(S): Aoyama, Norihito; Tatano, Toshio; Miike, Akira
PATENT ASSIGNEE(S): Kyowa Medex Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
EP 342984	A2	19891123	EP 1989-305054		19890518	<--
EP 342984	A3	19920311				
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE						
JP 02049600	A2	19900219	JP 1989-123050		19890517	<--
PRIORITY APPLN. INFO.:			JP 1988-121458	A	19880518	<--

OTHER SOURCE(S): MARPAT 112:194925
GI



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AB The invention provides a method and kit for the determination of NAD(P)H in a sample, e.g. a clin. sample, which comprises reducing pyruvic acid or a salt thereof with NAD(P)H in the presence of lactate dehydrogenase to form lactic acid, oxidizing the lactic acid in the presence of lactate oxidase to form H2O2, and determining the H2O2 by reaction with peroxidase in the presence of a chromogen unsusceptible to NAD(P)H. The method is especially useful in determination of analytes, e.g. bile acid or phosphohexose isomerase (PHI), in serum containing lactic acid, in which case the sample is initially reacted with lactate oxidase to convert the lactic acid to pyruvic acid and H2O2, which is then decomposed, the pyruvic acid produced in that case providing at least a proportion of the pyruvic acid which is subsequently converted back to lactic acid. A variety of aryl compds. useful as chromogens in the above method are also prepared or provided. Thus, 50-400 IU PHI/L was determined with a 1st reagent (pH 7.5) containing NaH2PO4, Triton X-100, MgCl2, peroxidase, lactate dehydrogenase, glucose-6-phosphate dehydrogenase, lactate oxidase, pyruvic acid, NAD, and I; and a 2nd reagent (pH 7.5) containing NaH2PO4, Triton X-100, 4-aminoantipyrine, and

fructose-6-phosphate. A calibration curve for the determination is shown.

L17 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:609691 HCAPLUS
DOCUMENT NUMBER: 109:209691
TITLE: Continuous fermentative manufacture of levo-rotatory mandelic acid
INVENTOR(S): Yamazaki, Yukinae; Maeda, Hidekatsu; Suzuki, Hideo
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63087986	A2	19880419	JP 1986-232842	19860930 <--
JP 03062393	B4	19910925		
PRIORITY APPLN. INFO.:			JP 1986-232842	19860930 <--

OTHER SOURCE(S): CASREACT 109:209691
AB Levo-rotatory mandelic acid (I) is manufactured continuously by ultrafiltration of a substrate solution containing benzoylformic acid (II) and HCO2H in an ultrafilter filled with a solution of II-reducing enzyme from Streptococcus sp. and a formic acid-dehydrogenating enzyme. Thus, a substrate solution (pH 6.5) containing II.Na, HCO2Na, HSCH2CH2OH, (NH4)2SO4, and K sorbate was mixed with bovine serum albumin, II-reducing enzyme extracted from Streptococcus faecalis IFO 12964, formic acid-dehydrogenating enzyme from Candida boidinii, and polyacrylamide-bonded NAD, placed in an ultrafilter, and filtered with simultaneous addition of the substrate solution to produce ≥80% (73-94%) I for the first 8 days.

L17 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:64804 HCAPLUS
DOCUMENT NUMBER: 104:64804
TITLE: Influence of various factors on the stability of alcohol dehydrogenase
AUTHOR(S): Mikelsone, Z.; Mitrofanova, A. N.; Nikolaev, A. L.
CORPORATE SOURCE: Mosk. Univ., Moscow, USSR
SOURCE: Zhurnal Fizicheskoi Khimii (1985), 59(12), 3031-5
CODEN: ZFKHA9; ISSN: 0044-4537
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The effects of carriers, NAD, and glutaraldehyde on the thermal stability of alc. dehydrogenase from horse liver were investigated. The greatest stabilization was achieved on the surface of silica gel modified with albumin. Increasing the concentration of NAD to ≤6 + 10-4M increased the stability of the enzyme in the soluble state; further increases in NAD decreased alc. dehydrogenase stability. NAD destabilized enzyme adsorbed to silica gel. Glutaraldehyde did not stabilize alc. dehydrogenase adsorbed to albumin-coated silica gel at any concentration tested.

L17 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:484140 HCAPLUS
DOCUMENT NUMBER: 103:84140

TITLE: Determination of body fluid indexes
PATENT ASSIGNEE(S): Yatoron K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60066993	A2	19850417	JP 1983-174117	19830922 <--
JP 05060920	B4	19930903		
PRIORITY APPLN. INFO.:			JP 1983-174117	19830922 <--

AB In determination of body fluid indexes, especially enzymes, with a reaction mixture containing redox enzymes, electron transmitter (e.g., phenazine methosulfate), and reducible color-developing agent, possible errors from the endogenous and exogenous interfering substances present in the sample may be eliminated by reacting the sample in the absence of the enzyme substrate and reducible color-developing agent but in the presence of the redox enzymes and electron transmitter. Thus, for determination of α-amylase in blood serum, 20 μL serum sample was incubated with 2 mL of a reagent mixture containing ATP, NADP, m-phenazine methosulfate, MgCl2, hexokinase, glucose 6-phosphate dehydrogenase , glucoamylase, peroxidase, and bovine albumin in a 100 mM citrate buffer (pH 8.2) at 37° for 5 min, and incubated at 37° for 5 min in the presence of a reagent mixts. containing Na bathophenanthroline sulfonate and Na starch glycholate in a 200 mM triethanolamine buffer (pH 7.0) and ammonium ferrisulfonate and citrate in a 50 mM triethanolamine buffer (pH 6.6). The reaction was terminated by the addition of a 0.1M triethanolamine buffer (pH 6.6) containing oxalate and EDTA and the absorbance measured at 535 nm to obtain the activity of α-amylase in the sample.

L17 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1983:608470 HCAPLUS
DOCUMENT NUMBER: 99:208470
TITLE: Studies on the phenazine methosulfate-tetrazolium salt capture reaction in NAD(P)-dependent dehydrogenase cytochemistry. I. Localization artefacts caused by the escape of reduced coenzyme during cytochemical reactions for NAD(P)-dependent dehydrogenases
AUTHOR(S): Raap, A. K.; Van Hoof, G. R. M.; Van Duijn, P.
CORPORATE SOURCE: Dep. Histochem. Cytochem., State Univ. Leiden, Leiden, 2333 AL, Neth.
SOURCE: Histochemical Journal (1983), 15(9), 861-79
CODEN: HISJAE; ISSN: 0018-2214
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The correct localization of oxidative enzymes using cytochem. tetrazolium methods, in which low-mol.-weight electron carriers such as NAD(P)H and reduced phenazine methosulfate (PMSH) are used, can be endangered by the escape to the reduced intermediates before they react to form the insol. formazan at the true enzyme-containing sites. To investigate this phenomenon, the glucose 6-phosphate dehydrogenase reaction was studied in fixed erythrocytes which, because of their microscopic dimensions, are well-suited for studying the loss of

intermediates. A mixture of active and heat-inactivated fixed erythrocytes was incubated in a PMS-supplemented medium for glucose 6-phosphate dehydrogenase. The cytophotometric histograms showed that the final formazan precipitate was equally distributed over both active and inactivated cells. When bovine serum albumin was added to the medium, all the formazan was bound to this protein and erythrocytes remained essentially unstained. The false localization in this system could be explained by an unfavorable balance between the capture of electrons carried by NADPH within the erythrocyte and the diffusion of NADPH out of the erythrocyte. The rate constant of NADPH oxidation was determined, as was the diffusion constant of NADPH in a protein matrix. Substituting the data obtained into formulas derived from the enzyme cytochem. localization theory of S. J. Holt and D. G. O'Sullivan (1958), it was calculated that the capture reaction was highly deficient. Theor., <1% of the total amount of formazan produced was localized within the erythrocyte, which explains the false localization observed Implications the cytochem. demonstration of NAD (P)-dependent dehydrogenases in cells and electrophoresis are briefly discussed.

L17 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:116591 HCAPLUS
DOCUMENT NUMBER: 94:116591
TITLE: 17β-Estradiol dehydrogenase from chicken liver
AUTHOR(S): Renwick, Alistair G. C.; Soon, Choong Yee; Chambers, Susan M.; Brown, Colin R.
CORPORATE SOURCE: Dep. Biochem., Univ. Auckland, Auckland, N. Z.
SOURCE: Journal of Biological Chemistry (1981), 256(4), 1881-7
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB NADP-linked 17β-estradiol dehydrogenase has been purified 300- to 400-fold from cell-free exts. of chicken liver in 20-30% yield by (NH4)2SO4 precipitation, ion-exchange chromatog., and gel filtration. The enzyme is stable for at least 3 mo when stored at -20° in buffer containing glycerol (50%). Two forms, with mol. wts. of 43,000 and 97,000, are present; these show 1 major band (Rm = 0.27) and one minor band (Rm = 0.25) on polyacrylamide disc gel electrophoresis. Rm Is defined as the ratio of the distance migrated by the protein band to that of the tracking dye. The species of lower mol. weight is the more active, with apparent Km values for 17β-estradiol of 25 and 17.3 μM in the presence and absence, resp., of bovine serum albumin in the assay medium. The apparent Km for NADP is 7.7 μM, and the optimum pH for dehydrogenation is 9.9. The lower mol. weight form has a λmax at 280 nm, a shoulder at 290 nm, and an A1cm1% of 12.1 at 280 nm. The fluorescence spectrum corresponds to that of a tryptophan-containing protein with λmax at 288 nm. Isoelec. focusing in gel at pH 5-8 shows 3 major bands of pI 6.9, 6.8, and 6.0. Crosslinking with di-Me suberimidate followed by electrophoresis reveals 5 bands. The enzyme is affected by SH-group reagents and possesses no associated estradiol-sensitive transhydrogenase activity.

```
=> d que stat l19
L6             1 SEA FILE=REGISTRY ABB=ON  ALBUMINS/CN
L7        173033 SEA FILE=HCAPLUS ABB=ON  (L6 OR ?ALBUMIN?)
L8           739 SEA FILE=HCAPLUS ABB=ON  L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD
                 OR NADP)
L9           378 SEA FILE=HCAPLUS ABB=ON  L8 AND ?ENZYME?
L10            6 SEA FILE=HCAPLUS ABB=ON  L9 AND ?DEHYDROGENATION?
L11          282 SEA FILE=HCAPLUS ABB=ON  L9 AND ?HYDROGEN?
L12          282 SEA FILE=HCAPLUS ABB=ON  L10 OR L11
L13            3 SEA FILE=HCAPLUS ABB=ON  L12 AND ?COLOR?(W)(?FORM? OR ?DEVELOP?
                 )
L14          171 SEA FILE=HCAPLUS ABB=ON  L12 AND (?HUMAN? OR MAN OR ?BOVINE?
                 OR COW?)
L15            2 SEA FILE=HCAPLUS ABB=ON  L14 AND ?TETRAZOLIUM?(W)?SALT?
L16            9 SEA FILE=HCAPLUS ABB=ON  L10 OR L13 OR L15
L18           12 SEA L16
L19            6 DUP REMOV L18 (6 DUPLICATES REMOVED)

=> d ibib abs l19 1-6

L19  ANSWER 1 OF 6     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:    95366763     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 7639524
TITLE:               Short-chain 3-hydroxy-2-methylacyl-CoA dehydrogenase from
                     rat liver: purification and characterization of a novel
                     enzyme of isoleucine metabolism.
AUTHOR:              Luo M J; Mao L F; Schulz H
CORPORATE SOURCE:    Department of Chemistry, City College of the City
                     University of New York, New York 10031, USA.
CONTRACT NUMBER:     HL 18089 (NHLBI)
                     HL 30847 (NHLBI)
                     RR 03060 (NCRR)
SOURCE:              Archives of biochemistry and biophysics, (1995 Aug 1) Vol.
                     321, No. 1, pp. 214-20.
                     Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         199509
ENTRY DATE:          Entered STN: 21 Sep 1995
                     Last Updated on STN: 3 Feb 1997
                     Entered Medline: 11 Sep 1995
AB   Short-chain L-3-hydroxy-2-methylacyl-CoA dehydrogenase (SC-HMAD), a
     soluble mitochondrial enzyme, was purified 6000-fold from rat
     liver in 6% yield by a six-step purification procedure.  The purified
     enzyme was homogenous as judged by gel electrophoresis in the
     presence of sodium dodecyl sulfate.  The molecular mass of this protein
     was estimated to be 28 kDa under denaturing conditions.  Under
     nondenaturing conditions, the enzyme behaved on Sephacryl S-200
     like serum albumin with a molecular mass of 66 kDa.  Thus,
     SC-HMAD seems to be a dimer composed of two, most likely identical 28-kDa
     subunits.  Immunoblotting with antibodies to pig heart L-3-hydroxyacyl-CoA
     dehydrogenase (HAD) (EC 1.1.1.35) revealed that SC-HMAD and HAD are
     immunologically unrelated proteins.  SC-HMAD, but not HAD, catalyzes the
     NAD(+)-dependent dehydrogenation of L-3-hydroxy-2-
     methybutyryl-CoA, a metabolite of isoleucine, to 2-methylacetoacetyl-CoA.
     Relative activities with 3-hydroxy-2-methylacyl-CoA thioesters having acyl
     chains with 4, 5, 10, and 16 carbon atoms are 88, 100, 16, and 0%,
     respectively.  Unbranched 3-hydroxyacyl-CoA thioesters are also substrates
```

of SC-HMAD, although poorer ones as evidenced by apparent Km values of 5 and 19 microM for L-3-hydroxy-2-methylbutyryl-CoA and L-3-hydroxybutyryl-CoA, respectively. Maximal velocities observed with these two substrates were similar. It is concluded that SC-HMAD catalyzes the second dehydrogenation step during the beta-oxidation of the isoleucine metabolite 2-methylbutyryl-CoA. This enzyme may also be involved in the beta-oxidation of natural and xenobiotic branched chain carboxylic acids.

L19 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 2
ACCESSION NUMBER: 1991:345813 BIOSIS
DOCUMENT NUMBER: PREV199192045188; BA92:45188
TITLE: COENZYME F-420 DEPENDENT N-5 N-10 METHYLENETETRAHYDROMETHANOPTERIN DEHYDROGENASE IN METHANOL GROWN METHANOSARCINA-BARKERI.
AUTHOR(S): ENSSLE M [Reprint author]; ZIRNGIBL C; LINDER D; THAUER R K
CORPORATE SOURCE: LABORATORIUM FUER MIKROBIOLOGIE, FACHBEREICH BIOLOGIE, PHILIPPS-UNIVERSITAET, KARL-VON-FRISCH-STRASSE, W-3550 MARBURG, WEST GERMANY
SOURCE: Archives of Microbiology, (1991) Vol. 155, No. 5, pp. 483-490.
CODEN: AMICCW. ISSN: 0302-8933.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 31 Jul 1991
Last Updated on STN: 11 Sep 1991

AB The dehydrogenation of N5, N10-methylene tetrahydromethanopterin (CH2 = H4MPT) to N5, N10-methenyltetrahydromethanopterin (CH .tbd. H4MPT+) is an intermediate step in the oxidation of methanol to CO2 in Methanosarcina barkeri. The reaction is catalyzed by CH2 = H4MPT dehydrogenase, which was found to be specific for coenzyme F420 as electron acceptor; neither NAD, NADP nor viologen dyes could substitute for the 5-deazaflavin. The dehydrogenase was anaerobically purified almost 90-fold to apparent homogeneity in a 32% yield by anion exchange chromatography on DEAE Sepharose and Mono Q HR, and by affinity chromatography on Blue Sepharose. Sodium dodecyl sulfate/polyacrylamide gel electrophoresis revealed only one protein band with an apparent mass of 31 kDa. The apparent molecular mass of the native enzyme determined by polyacrylamide gradient gel electrophoresis was 240 kDa. The ultraviolet/visible spectrum of the purified enzyme was almost identical to that of albumin suggesting the absence of a chromophoric prosthetic group. Reciprocal plots of the enzyme activity versus the substrate concentrations were linear: the apparent Km for CH2 = H4MPT and for coenzyme F420 were found to be 6 μM and 25 μM, respectively. Vmax was 4,000 μmol min-1 · mg-1 protein (kcat = 2,066 s-1) at pH 6 (the pH optimum) and 37°C. The Arrhenius activation energy was 40 KJ/mol. The N-terminal amino acid sequence was found to be 50% identical with that of the F420-dependent CO2 = H4MPT dehydrogenase isolated from H2/CO2 grown Methanobacterium thermoautotrophicum.

L19 ANSWER 3 OF 6 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 84031689 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6629852
TITLE: Studies on the phenazine methosulphate-tetrazolium salt capture reaction in NAD (P)+-dependent dehydrogenase cytochemistry. I. Localization artefacts caused by the escape of reduced co-

enzyme during cytochemical reactions for NAD(P)+-dependent dehydrogenases.
AUTHOR: Raap A K; Van Hoof G R; Van Duijn P
SOURCE: The Histochemical journal, (1983 Sep) Vol. 15, No. 9, pp. 861-79.
Journal code: 0163161. ISSN: 0018-2214.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198312
ENTRY DATE: Entered STN: 19 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 17 Dec 1983

AB The correct localization of oxidative enzymes using cytochemical tetrazolium methods, in which low molecular weight electron carriers such as NAD(P)H and reduced phenazine methosulphate (PMSH) are used, can be endangered by the escape of the reduced intermediates before they react to form the insoluble formazan at the true enzyme -containing sites. To investigate this phenomenon, the glucose-6-phosphate dehydrogenase reaction was studied in fixed erythrocytes which, because of their microscopic dimensions, are well-suited for studying the loss of intermediates. A mixture of active and heat-inactivated fixed erythrocytes was incubated in a PMS-supplemented medium for glucose-6-phosphate dehydrogenase. The cytophotometric histograms showed that the final formazan precipitate was equally distributed over both active and inactivated cells. When bovine serum albumin was added to the medium, all the formazan was found to be bound to this protein and the erythrocytes remained essentially unstained. The false localization in this system could be explained by an unfavourable balance between the capture of electrons carried by NADPH within the erythrocyte and the diffusion of NADPH out of the erythrocyte. The rate constant of NADPH oxidation was determined, as was also the diffusion constant of NADPH in a protein matrix. Substituting the data obtained into formulae derived from the enzyme cytochemical localization theory of Holt & O'Sullivan (1958), it was calculated that the capture reaction was highly deficient and, theoretically, less than 1% of the total amount of formazan produced was localized within the erythrocyte which explains the false localization observed. The importance of these findings for the cytochemical demonstration of NAD(P)+-dependent dehydrogenases in cells and electropherograms is briefly discussed.

L19 ANSWER 4 OF 6 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 81117276 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6936398
TITLE: Estradiol-17 beta dehydrogenase from chicken liver.
AUTHOR: Renwick A G; Soon C Y; Chambers S M; Brown C R
SOURCE: The Journal of biological chemistry, (1981 Feb 25) Vol. 256, No. 4, pp. 1881-7.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198104
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 21 Apr 1981

AB NADP+-linked estradiol-17 beta dehydrogenase has been purified

300- to 400-fold from cell-free extracts of chicken liver in a 20 to 30% yield by ammonium sulfate precipitation, ion exchange chromatography, and gel filtration. The enzyme is stable for at least 3 months when stored at -20 degrees C in buffer containing glycerol (50%, v/v). Two forms, with molecular weights of 43,000 and 97,000 are present; these show one major band (Rm = 0.27) and one minor band (Rm = 0.25) on polyacrylamide disc gel electrophoresis. (Rm is defined as the ratio of the distance migrated by the protein band to that of the tracking dye.) The species of lower molecular weight is the more active, with apparent Km values for estradiol-17 beta of 25 and 17.3 microM in the presence and absence, respectively, of bovine serum albumin in the assay medium. The apparent Km for NADP+ is 7.7 microM, and the optimum pH for dehydrogenation is 9.9. The lower molecular weight form has a lambda max at 280 nm, a shoulder at 290 nm, and an A 1% 1 cm of 12.1 at 280 nm. The fluorescence spectrum corresponds to that of a tryptophan-containing protein with lambda max at 288 nm. Isoelectric focusing in gel at pH 5 to 8 shows three major bands of pI 6.9, 6.8, and 6.0. Cross-linking with dimethyl suberimidate followed by electrophoresis reveals five bands. The enzyme is affected by thio reagents and possesses no associated estradiol-sensitive transhydrogenase activity.

L19 ANSWER 5 OF 6 MEDLINE on STN
ACCESSION NUMBER: 66031561 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4378709
TITLE: Dehydrogenation of androsterone by purified 3-alpha-hydroxy steroid-dependent nicotinamide-adenine dinucleotide (phosphate)-transhydrogenating enzyme of rat liver.
AUTHOR: Pietruszko R; Baron D N
SOURCE: The Biochemical journal, (1965 Aug) Vol. 96, No. 2, pp. 557-66.
Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 196601
ENTRY DATE: Entered STN: 1 Jan 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 8 Jan 1966

L19 ANSWER 6 OF 6 JAPIO (C) 2006 JPO on STN
ACCESSION NUMBER: 2004-061263 JAPIO
TITLE: METHOD AND REAGENT FOR DETERMINING SPECIFIC CONSTITUENT IN BIOLOGICAL SAMPLE
INVENTOR: EBINUMA HIROYUKI; YUKI KUMIKO
PATENT ASSIGNEE(S): DAI ICHI PURE CHEM CO LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2004061263	A	20040226	Heisei	G01N033-52

APPLICATION INFORMATION
STN FORMAT: JP 2002-219222 20020729
ORIGINAL: JP2002219222 Heisei
PRIORITY APPLN. INFO.: JP 2002-219222 20020729
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2004
AN 2004-061263 JAPIO

AB PROBLEM TO BE SOLVED: To provide a determination method and a reagent for determination that accurately determine a specific constituent for effectively avoiding the influence of hemoglobin when determining the specific constituent in the biological sample by allowing an enzyme having oxidation capability due to dehydrogenation to the specific substance or a substance deriving from the specific substance under the presence of an electron acceptor to operate on the biological sample containing hemoglobin. SOLUTION: The measurement reagent containing albumin is used when allowing the enzyme having oxidation capability due to dehydrogenation to the specific constituent or the substance deriving from the specific constituent under the presence of an electron acceptor to operate on the biological sample containing hemoglobin, and measuring the reductant of the generated electron acceptor for determining the specific constituent in the biological sample. The albumin may preferably originate from humans or cattle.

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=> d que stat l23
L6            1 SEA FILE=REGISTRY ABB=ON  ALBUMINS/CN
L7       173033 SEA FILE=HCAPLUS ABB=ON  (L6 OR ?ALBUMIN?)
L8          739 SEA FILE=HCAPLUS ABB=ON  L7 AND (?ELECTRON?(W)?ACCEPT? OR NAD
                OR NADP)
L9          378 SEA FILE=HCAPLUS ABB=ON  L8 AND ?ENZYME?
L10           6 SEA FILE=HCAPLUS ABB=ON  L9 AND ?DEHYDROGENATION?
L11         282 SEA FILE=HCAPLUS ABB=ON  L9 AND ?HYDROGEN?
L12         282 SEA FILE=HCAPLUS ABB=ON  L10 OR L11
L13           3 SEA FILE=HCAPLUS ABB=ON  L12 AND ?COLOR?(W)(?FORM? OR ?DEVELOP?
                )
L14         171 SEA FILE=HCAPLUS ABB=ON  L12 AND (?HUMAN? OR MAN OR ?BOVINE?
                OR COW?)
L15           2 SEA FILE=HCAPLUS ABB=ON  L14 AND ?TETRAZOLIUM?(W)?SALT?
L16           9 SEA FILE=HCAPLUS ABB=ON  L10 OR L13 OR L15
L20         633 SEA FILE=USPATFULL ABB=ON  L16 AND (PRD<20040127 OR PD<20040127
                )
L21         558 SEA FILE=USPATFULL ABB=ON  L20 AND (NAD OR NADP)
L22         100 SEA FILE=USPATFULL ABB=ON  L21 AND ?DEHYDROGENAT?
L23          15 SEA FILE=USPATFULL ABB=ON  L22 AND ?COLOR?(W)(?FORM? OR
                ?DEVELOP?)

=> d ibib abs l23 1-15

L23  ANSWER 1 OF 15  USPATFULL on STN
ACCESSION NUMBER:       2005:118212  USPATFULL
TITLE:                  Method of imparting disease resistance to plants by
                        reducing polyphenol oxidase activities
INVENTOR(S):            Hakimi, Salim M., Des Moines, IA, UNITED STATES
                        Krohn, Bradley M., Ballwin, MI, UNITED STATES
                        Stark, David M., Chesterfield, MI, UNITED STATES

                             NUMBER       KIND    DATE
                        ---------------- ------ --------
PATENT INFORMATION:     US 2005101484      A1   20050512
APPLICATION INFO.:      US 2003-415759     A1   20011102  (10)
                        WO 2001-US50427         20011102

                               NUMBER        DATE
                        ------------------ --------
PRIORITY INFORMATION:   US 2000-245876P    20001103 (60)            <--
DOCUMENT TYPE:          Utility
FILE SEGMENT:           APPLICATION
LEGAL REPRESENTATIVE:   MONSANTO COMPANY, 800 N. LINDBERGH BLVD., ATTENTION:
                        G.P. WUELLNER, IP PARALEGAL, (E2NA), ST. LOUIS, MO,
                        63167, US
NUMBER OF CLAIMS:       30
EXEMPLARY CLAIM:        1
NUMBER OF DRAWINGS:     5 Drawing Page(s)
LINE COUNT:             1598
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      The present invention relates to a method for enhancing a plant's
        resistance to fungal diseases by reducing expression of polyphenol
        oxidase (PPO). The present invention also relates to a method for
        improving a potato plant's anti-bruising trait. By using antisense
        technology to generate transgenic potato plants with tuber-specific
        promoters, PPO can be reduced to a level at which the potato tubers
        sufficiently increases its resistance to fungal disease symptoms
        including late blight caused by Phytophthora infestans. Also provided
        are certain novel combinations of promoters and PPO-derived sequences
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which also provide improvements in tuber bruise susceptibility.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 2 OF 15 USPATFULL on STN
ACCESSION NUMBER: 2003:155381 USPATFULL
TITLE: Method for separating and assaying lipoprotein, an assembly for performing such a method, and a system including such an assembly
INVENTOR(S): Nakazato, Tokiya, Urawa, JAPAN
PATENT ASSIGNEE(S): Helena Laboratories Co., Ltd., Saitama, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6576106	B1	20030610	<--
APPLICATION INFO.:	US 2000-549925		20000414 (9)	

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1999-107258	19990414	<--
	JP 2000-107103	20000407	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Warden, Jill
ASSISTANT EXAMINER: Brown, Jennine
LEGAL REPRESENTATIVE: Venable, LLP, Frank, Robert J., Axelrod, Nancy J.
NUMBER OF CLAIMS: 36
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 1482
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for separating and assaying lipoprotain to determine a degree of modification of a predetermined component in a specimen of lipoprotein, comprising the step of: determining a distance "a" from an application point of the standard sample to a fraction corresponding to the predetermined lipoprotein using an electrophoretic pattern obtained by electrophoresis of a standard sample; determining a distance "b" from the application point of the specimen to a fraction corresponding to the predetermined lipoprotein using electrophoretic pattern obtained by electrophoresis of a specimen; comparing the distance "a" and the distance "b" to determine a relative mobility "z(=b/a)" of the specimen to the standard sample, wherein the degree of modification of the predetermined component in the specimen being judged on the basis of the relative mobility "z".

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 3 OF 15 USPATFULL on STN
ACCESSION NUMBER: 2003:44768 USPATFULL
TITLE: Methods and compositions for the treatment of macular and retinal degenerations
INVENTOR(S): Travis, Gabriel H., Los Angeles, CA, UNITED STATES
PATENT ASSIGNEE(S): Board of Regents, The University of Texas System (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003032078	A1	20030213	<--
APPLICATION INFO.:	US 2001-885303	A1	20010619 (9)	

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-263837P	20010123 (60) <--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Gina N. Shishima, Fulbright & Jaworski L.L.P., Suite 2400, 600 Congress Avenue, Austin, TX, 78701
NUMBER OF CLAIMS: 53
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 7372
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is a method for screening and identifying therapeutic agents for the treatment of macular or retinal degeneration. The candidate substances preferably reduces the activity of 11-cis-retinol dehydrogenase. In vitro and in vivo studies administering the inhibitor molecules to abcr knockout mice and analyzing for the inhibition of lipofuscin (A2E) accumulation are contemplated.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 4 OF 15 USPATFULL on STN
ACCESSION NUMBER: 1999:75501 USPATFULL
TITLE: Method for assaying sulfate-conjugated bile acid and therefore
INVENTOR(S): Adachi, Kenichi, Uji, Japan
Tazuke, Yasuhiko, Ashiya, Japan
Tsukada, Yoji, Kyoto, Japan
PATENT ASSIGNEE(S): Marukin Shoyu Co., Ltd., Kagawa, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5919644		19990706	<--
	WO 9723643		19970703	<--
APPLICATION INFO.:	US 1997-875983		19970821	(8)
	WO 1996-JP3678		19961217	
			19970821	PCT 371 date
			19970821	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1995-333336	19951221 <--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Gitomer, Ralph
LEGAL REPRESENTATIVE: Knobbe, Martens, Olson & Bear, LLP
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 4
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 14 Drawing Page(s)
LINE COUNT: 803
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In a method of quantifying sulfate-conjugated bile acid in a sample with bile acid sulfate sulfatase and a reductive system indicator, an 2-(4-iodophenyl)-3-(4-nitrophenyl)-5-(2,4-disulfophenyl)-2H-tetrazolium salt is used as a reductive system indicator. Sulfate-conjugated bile acid can be quantified through a single reaction without complication.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 5 OF 15 USPATFULL on STN
ACCESSION NUMBER: 1998:82541 USPATFULL
TITLE: Method for the determination of cast in urine
INVENTOR(S): Carter, Jesse M., 9105 S. Rome Ave., Tampa, FL, United States 33606
Smith, Jack V., 8505 42nd Ave. N., St. Petersburg, FL, United States 33709

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5780239		19980714	<--
APPLICATION INFO.:	US 1996-675386		19960702	(8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1994-347124, filed on 23 Nov 1994, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Spiegel, Carol A.
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
LINE COUNT: 1312
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Method for detecting casts in urine by measuring Tamm-Horsfall protein by solid and liquid phase reagents including a method for manufacturing a enzyme specific for Tamm-Horsfall protein which produces a detectable response in the presence of casts in urine.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 6 OF 15 USPATFULL on STN
ACCESSION NUMBER: 93:39895 USPATFULL
TITLE: Method of using N-acetyl-2,3-Didehydroleucine acylase for the preparation of D- or L-tryptophyl glycine, D- or L-tryptophyl-D-methionine or L-tryptophyl-D-cysteine
INVENTOR(S): Kula, Maria-Regina, Niederzier/Hambach, Germany, Federal Republic of
Kittelmann, Matthias, Freiburg, Germany, Federal Republic of
PATENT ASSIGNEE(S): Degussa Aktiengesellschaft, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5212069		19930518	<--
APPLICATION INFO.:	US 1992-870817		19920420	(7)

RELATED APPLN. INFO.: Division of Ser. No. US 1990-472388, filed on 1 Feb 1990, now patented, Pat. No. US 5134073

	NUMBER	DATE	
PRIORITY INFORMATION:	DE 1989-3903324	19890204	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.
ASSISTANT EXAMINER: Meller, Mike
LEGAL REPRESENTATIVE: Cushman, Darby & Cushman
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
LINE COUNT: 975

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A novel N-Acetyl-2,3-didehydroaminoacid-acylase is obtained by cultivating Zoogloea ramigera DSM 4306. The new enzyme can be used in a coupled enzyme system with an L-Leucinedehydrogenase for the enzymatic conversion of N-Acetyl-2,3-didehydroleucine to L-Leucine, D- or L-tryptophylglycine to D- or L-tryptophaneamide and glycine, as well as other tryptophanedipeptides to tryptophaneamides and free amino acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 7 OF 15 USPATFULL on STN
ACCESSION NUMBER: 92:61850 USPATFULL
TITLE: Microbiologically produced N-acetyl-2,3-didehydroleucine acylase
INVENTOR(S): Kula, Maria-Regina, Niederzier/Hambach, Germany, Federal Republic of
Kittelmann, Matthias, Freiburg, Germany, Federal Republic of
PATENT ASSIGNEE(S): Degussa Aktiengesellschaft, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5134073		19920728	<--
APPLICATION INFO.:	US 1990-472388		19900201	(7)

	NUMBER	DATE	
PRIORITY INFORMATION:	DE 1989-3903324	19890204	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Robinson, Douglas W.
ASSISTANT EXAMINER: Meller, Mike
LEGAL REPRESENTATIVE: Cushman, Darby & Cushman
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
LINE COUNT: 981
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A novel N-Acetyl-2,3-didehydroaminoacid-acylase is obtained by cultivating Zoogloea ramigera DSM 4306. The new enzyme can be used in a coupled enzyme system with an L-Leucinedehydrogenase for the enzymatic conversion of N-Acetyl-2,3-didehydroleucine to L-Leucine, D- or L-tryptophylglycine to D- or L- tryptophaneamide and glycine, as well as other tryptophanedipeptides to tryptophaneamides and free amino acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 8 OF 15 USPATFULL on STN
ACCESSION NUMBER: 92:34059 USPATFULL
TITLE: Chemiluminescence assay of in vivo inflammation
INVENTOR(S): Allen, Robert C., Little Rock, AR, United States
PATENT ASSIGNEE(S): EXOxEmis, Inc., San Antonio, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5108899		19920428	<--
APPLICATION INFO.:	US 1989-429105		19891031	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kepplinger, Esther L.
ASSISTANT EXAMINER: Wortman, Donna C.
LEGAL REPRESENTATIVE: Christensen, O'Connor, Johnson & Kindness
NUMBER OF CLAIMS: 60
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 1611
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The presence or amount of in vivo inflammation of a patient is determined by comparing the extent of opsonin receptor expression in vivo on phagocytes of a patient with the maximum opsonin receptor expression inducible on phagocytes of the patient in vitro after stimulation with a receptor expression priming agent. Preferably, the in vivo state of inflammation of a patient is determined by contacting a first portion of a phagocyte containing biological sample from the patient with a opsonified oxidative metabolism stimulating agent capable of elicting metabolic activation and with a chemiluminigenic substrate, contacting a second portion of the biological sample from the patient with an opsonin receptor expression priming agent, an opsonfield oxidative metabolism stimulating agent capable of eliciting metabolic activation and a chemiluminigenic substrate, and then comparing the chemiluminescence response of the first and second portions of the sample as a measure of the immune response potential or state of inflammation of the patient. Phagocyte function is additionally quantitatively evaluated by measuring the phagocyte oxygenation capacity of a maximally opsonin receptor primed and stimulated biological sample of a patient, determining the specific oxygenation capacity per phagocyte in the sample, and comparing the specific oxygenation capacity to a set of controls representing the normal distribution of specific oxygenation established from testing a large population. The phagocyte-specific oxygenation capacity is determined by contacting the sample with an opsonin receptor expression priming agent, an opsonified oxidative metabolism stimulating agent and a chemiluminigenic substrate, measuring the chemiluminescence response of the sample, determining the chemiluminescence response per phagocyte of the sample and comparing the response per phagocyte with that of the normal range of values. Kits and reagents are provided for use in the practice of the disclosed methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 9 OF 15 USPATFULL on STN
ACCESSION NUMBER: 91:90687 USPATFULL
TITLE: Integral multilayer analytical element
INVENTOR(S): Arai, Fuminori, Asaka, Japan
Igarashi, Takeshi, Asaka, Japan
Tanaka, Mitsutoshi, Asaka, Japan
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5063153		19911105	<--
APPLICATION INFO.:	US 1987-107674		19871009	(7)

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1986-240288	19861009	<--
	JP 1986-265090	19861106	<--

JP 1986-265091 19861106 <--
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Nucker, Christine
ASSISTANT EXAMINER: Scheiner, Laurie
LEGAL REPRESENTATIVE: McAulay Fisher Nissen Goldberg & Kiel
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 964
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An improvement of a dry integral multilayer analytical element having functional layers which contain dehydrogenase, oxidized nicotinamide coenzyme, an electron transport compound and an electron acceptable dye-forming compound is disclosed. The improvement the analytical element resides in that an alkali agent or an alkaline buffer is contained in a layer which is different from a layer or layers containing the oxidized nicotinamide coenzyme and electron acceptable dye-forming compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 10 OF 15 USPATFULL on STN
ACCESSION NUMBER: 91:56845 USPATFULL
TITLE: Color control system
INVENTOR(S): Palmer, John L., Philadelphia, PA, United States
Timmerman, Marsha W., Allentown, PA, United States
PATENT ASSIGNEE(S): Enzymatics, Inc., Horsham, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5032506		19910716	<--
APPLICATION INFO.:	US 1986-942414		19861216	(6)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kepplinger, Esther L.
ASSISTANT EXAMINER: Scheiner, Toni R.
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner
NUMBER OF CLAIMS: 61
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 13 Drawing Page(s)
LINE COUNT: 1486
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An assay system useful for the determination of NAD(P)H, NAD(P), or a substrate of an enzyme which reacts with the formation or comsumption of NAD(P)H. Concentrations of organic substrates for example alcohol, cholesterol, uric acid, in a biological fluid such as saliva, blood or urine may be determined. The system includes a diaphorase which catalyzes a NAD (P)H-dependent reduction of a chromogen to cause a visible color change; this color change is indicative of the concentration sought to be determined. The system includes a chromogen which is a first substrate for the diaphorase which causes a color change when reduced by NAD(P)H, and a second substrate which is a competing substrate for the diaphorase; the competing substrate is irreversibly reduced by the diaphorase. The system is capable of measuring colorimetrically without dilution concentrations of organic compounds in biological fluids which previously could not be measured in such concentration. The system provides a convenient, practical sobriety test. The invention also provides a method for such determination and diagnostic kit.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 11 OF 15 USPATFULL on STN
ACCESSION NUMBER: 90:93094 USPATFULL
TITLE: Multi-layered element for quantititative analysis of immuno reactant
INVENTOR(S): Sudo, Yukio, Asaka, Japan
Masuda, Nobuhito, Asaka, Japan
Miura, Kenji, Asaka, Japan
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4975366		19901204	<--
APPLICATION INFO.:	US 1987-15916		19870218	(7)

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1986-33988	19860220	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Hill, Jr., Robert J.
LEGAL REPRESENTATIVE: McAulay Fisher Nissen & Goldberg
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1206
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A multi-layered element for the quantative analysis of an immuno-reactant having a water-impermeable and light-transmissible support layer; a coloring reagent layer carried by said support layer and containing a hydrophilic polymer as a binder; and a reaction layer covering said reagent layer and made of a porous matrix. When the analyte immunoreactant is an antigen, said reaction layer contains the specific antibody for the antigen, the antibody being immobilized by a first water-insoluble carrier. When the analyte immuno-reactant is an antibody, said reaction layer contains the specific antigen for the antibody. The reaction layer contains an enzyme substrate immobilized by a second water-insoluble carrier different from said first water-insoluble carrier. The coloring reagent layer contains a detection reagent composition for coupling with an enzymatic reaction product produced by the reaction beween the enzyme-labelled complex of the immuno-reactant and the enzyme substrate immobilized by the second water-insoluble carrier. Upon coupling of the detection reagent composition with the enzymatic reaction product, a color is developed, the optical density of which is measured to determine the quantity of the analyte immuno-reactant contained in a liquid sample.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 12 OF 15 USPATFULL on STN
ACCESSION NUMBER: 90:75037 USPATFULL
TITLE: Assay for antigens by binding immune complexes to solid supports free of protein and non-ionic binders
INVENTOR(S): Milburn, Gary L., Sunnyvale, CA, United States
Rabbie, Judith, Palo Alto, CA, United States
Houts, Thomas M., Mountain View, CA, United States

PATENT ASSIGNEE(S): Syntex (U.S.A.) Inc., Palo Alto, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4959303		19900925	<--
APPLICATION INFO.:	US 1987-135869		19871221	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Spiegel, Jack
LEGAL REPRESENTATIVE: Leitereg, Theodore J.
NUMBER OF CLAIMS: 79
EXEMPLARY CLAIM: 1
LINE COUNT: 1033

AB Methods are disclosed for detecting an antigen in a biological sample. The methods involve providing in combination a solid support, which is substantially free of specific binding proteins, and a medium comprising an antigen from the sample and an antibody for the antigen. The combination is incubated under conditions sufficient for the antibody when bound to the antigen to bind to the support. The presence or amount of antibody on the support or in the medium is determined and is related to the presence of antigen in the sample. The methods have particular application to the detection of gram-negative bacteria.

L23 ANSWER 13 OF 15 USPATFULL on STN
ACCESSION NUMBER: 90:52814 USPATFULL
TITLE: Oxidized coenzyme-containing dry analytical element
INVENTOR(S): Arai, Fuminori, Asaka, Japan
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4939085		19900703	<--
APPLICATION INFO.:	US 1987-107673		19871009	(7)

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1986-240287	19861009	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Warden, Robert J.
ASSISTANT EXAMINER: Spiegel, Carol A.
LEGAL REPRESENTATIVE: McAulay Fisher Nissen & Goldberg
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 577
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A dry analytical element having functional layers which contain dehydrogenase, oxidized nicotinamide coenzyme, pyruvate, an electron transport compound and an electron acceptable dye-forming compound is disclosed. The improvement the analytical element resides in that the coenzyme and dye-forming compound are contained in one or two layers which are different from a layer containing pyruvate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 14 OF 15 USPATFULL on STN
ACCESSION NUMBER: 89:9265 USPATFULL
TITLE: Composition used for the determination of beta-hydroxybutyric acid and a method for preparing the said composition
INVENTOR(S): Shigeta, Yukio, Hyogo, Japan
Harano, Yutaka, Shiga, Japan
Yamada, Shigeki, Kyoto, Japan
Takahaski, Yoshinori, Fukui, Japan
PATENT ASSIGNEE(S): Kabushiki Kaisha Kyoto Daiichi Kagaku, both of, Japan (non-U.S. corporation)
Kabushiki Kaisha Sanwa Kagaku Kenkyusho, both of, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4803158		19890207	<--
APPLICATION INFO.:	US 1986-922178		19861023 (6)	

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1984-582059, filed on 21 Feb 1984, now abandoned

	NUMBER	DATE	
PRIORITY INFORMATION:	JP 1983-39813	19830308	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Warden, Robert J.
ASSISTANT EXAMINER: Saunders, David A.
LEGAL REPRESENTATIVE: Darby & Darby
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 533
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to a composition for determining β-hydroxybutyric acid, usable for doctors, nurses, and patients themselves simply and quickly without use of special instruments, and also relates to a method for preparing the said composition.

The composition of the invention oxidizes β-hydroxybutyric acid under alkaline conditions and the presence of nicotineamide adenine dinucleotide (NAD) by β-hydroxybutyric acid dehydrogenase, and the produced reduction-type NAD (NADH) reduces tetrazolium salt through an electron carrier to produce formazan developing color. The composition permits accurate measurement quickly and simply, and has excellent conservative stability, because it is a uniform solid-phase composition prepared by applying reagents necessary for the reaction of film impermeable to water together with a natural or synthesized film forming polymer. The invention further provides a method for preparing the said composition by applying, on a supporter impermeable to water, W/O emulsion which is formed by dispersing alkaline buffer, β-hydroxybutyric acid dehydrogenase, NAD, electron carrier, and tetrazolium salt in an organic solvent insoluble in water together with a natural or synthesized film forming polymer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 15 OF 15 USPATFULL on STN
ACCESSION NUMBER: 77:25216 USPATFULL

TITLE: Determination of glutamate and glutamic transaminases
INVENTOR(S): Stavropoulos, William S., Carmel, IN, United States
Acuff, Kenneth J., Indianapolis, IN, United States
PATENT ASSIGNEE(S): The Dow Chemical Company, Midland, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4024021		19770517	<--
APPLICATION INFO.:	US 1975-575879		19750509 (5)	

RELATED APPLN. INFO.: Continuation of Ser. No. US 1973-380810, filed on 19 Jul 1973, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.
LEGAL REPRESENTATIVE: Johnson, Maynard R.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
LINE COUNT: 420
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Glutamate and glutamic transaminases are determined by mixing a substrate-reagent composition that is essentially free of ammonia or ammonium ions with a specimen to be analyzed, incubating the resulting mixture for less than about 15 minutes, terminating incubation and measuring a color produced.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.